

SEQUENCE LISTING

<110>	Europá	ische	es L	abor	ator	ium	für	Mole	kula	rbic	logi	.е			
	Protei modula														
k130×	19595P	,MO													
	PCT/EP 2000-0		0877												
	EF 991 1999-0		2.6												
-:160:-	4														
::170:- PatentIn Ver. 2.1															
+:210:+ 211:+ +:212:+ +:215:+	1973	ıs sp.													
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tttato	egoda t	ttggd	ccag	t gg	tāāc	staaç	g ogo	cctga	aagg	tggd	stgat	tta	atttq	gotoag	180
atcaac	aada g	gggee	ggtg	t cc	acct	ttot	. ata		. Arg					gta Val	234
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Thr Ai	g Ala 10	Ser S	Ser	Ile	Cys	Gly 15	Ser	Gly	Val	Lys	Gln 20	Val	11e	Gly	
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	Ly His 25	Pro l	His	Ala	Arg 30	Val	Val	Gly	Ala	Arg 35	гÀг	Ala	Gin	11e	
act ga	ag aga	gag (gag	ttg	tca	gtc	aaa	ccc	aaa	atg	gtg	cga	aat	acc	378

Pro 40	Glu	Arg	Glu	Glu	Leu 45	Ser	Val	Lys	Pro	Lys 50	Met	Val	Arg	Asn	Thr 55	
				-	ccc Pro	-		-	_	-						426
-					cag Gln											474
		_	_		ctc Leu		-	_	-		-					522
					acc Thr											570
					aat Asn 125											618
					tgg Trp											66F
			_	-	ct: Leu		-									714
					cga Arg											762
000 r :				-	tgg Tro	_										810
					ctt Leu 205											€5±
					gcc Ala											90 ห
tgt	gac	tct	ggt	ggg	gtc	tcc	cac	aac	aac	tot	tcc	tst	cca	gaa	caa	954

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gag att tit dad tad add aat ayg gag tig too hag gag dit did atg = 1002
Glu Ile Phe His Tyr Thr Asn Arg Glu Trp Ser Gln Glu Leu Leu Met 250 255 260
tig ded det gag etg tig etg gat ded gag tigt act dat gad tita dad 1050 Leu Pro Pro Glu Leu Leu Asp Pro Glu Cys Thr His Asp Leu His 265 270 275
att oto dag gag oda tig git gga tia gag oda gat ggg adg gog etg 1098 The Leu Glin Glu Pro Leu Val Gly Leu Glu Pro Asp Gly Thr Ala Leu 280 285 290 295
gaa tgg cac cac ctt tagtageega ttgteteete egagetttta ttetteteta — 1153 Glu Trp His His Leu 300
steadaaget dagcaettat tetoteetee taaggaetty teaatyttsa gaettaatty 1213
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color

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RZIZA PRT

(213> Xenopus sp.

<400> 2

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Gly Ala Arg Lys Ala Gln Ile Pro Glu Arg Glu Glu Leu Ser Val Lys 35 40 45

Pro Lys Met Val Arg Asn Thr His Leu Asn Leu Gln Pro Gln Glu Arg 50 55 60

Gln Ala Phe Tyr Arg Leu Leu Glu Asn Glu Gln Ile Gln Glu Phe Leu eb 70 75 80

Ser Met Asp Ser Cys Leu Arg Ile Ser Asp Lys Tyr Leu Ile Ala Met 85 90 95

Val Leu Ala Tyr Phe Lys Arg Ala Ala Gly Leu Tyr Thr Ser Glu Tyr 100 105 110

Thr Thr Met Asn Phe Phe Val Ala Leu Tyr Leu Ala Asn Asp Met Glu 115 120 125

Glu Asp Glu Glu Asp Tyr Lys Tyr Glu Ile Phe Pro Trp Ala Leu Gly
130 135 140

Asp Ser Trp Arg Glu Leu Pne Pro Gl: Pho Leu Arg Leu Arg Asp Asp 145 150 155

Phe Trp Ala Lys Met Asn Tyr Arg Ala Val Val Ser Arg Arg Cys Cys 165 170 175

Asp Glu Val Met Ser Lys Asp Pro Thr His Trp Ala Trp Leu Arg Asp 180 185 190

Arg Pro Met His His Ser Gly Ala Met Arg Gly Tyr Leu Arg Asn Glu
195 200 205

Asp Asp Phe Phe Pro Arg Gly Pro Gly Leu Thr Pro Ala Ser Cys Thr 210 215 220

Lin: Oys His Dys Ala Gly Val Cys Asp Ser Gly Gly Val Ser His Asn
225 230 236 235

Asn Ser Ser Ser Pro Glu Gln Glu Ile Phe His Tyr Thr Asn Arg Glu 245 250 255

Trp Ser Gln Glu Leu Leu Met Leu Pro Pro Glu Leu Leu Leu Asp Pro 260 265 270

Glu Cys Thr His Asp Leu His Ile Leu Gln Glu Pro Leu Val Gly Leu 275 280 285

Glu	Pro	Asp	Gly	Thr	Ala	Leu	Glu	Trp	His	His	Leu
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·(211)· 1357	
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.2222 (163)(1636)	
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titigotoaga toaacootog yttegtigto coopititota ca atg agg cat atg = 179	4
Met Arg His Met	
:	
cag agt goa acc egg goe acc tta gtt tgt gge age ggg gta aag cag = 22.	2
Glr. Ser Ala Thr Arg Ala Thr Leu Val Cys Gly Ser Gly Val Lys Gln	
5 10 15 20	
ato att god aag gga cat deg aat add ogg gtt tit gga geg ogd aag - 270	rī
The The Ala Lys Gly His Pro Asn Thr Arg Val Phe Gly Ala Arg Lys	-'
25 30 35	
gog aaa ato oot gag aga gag gtg ota goa goo aaa ooc aag ato aog - 318	8
Ala Lys Ile Pro Glu Arg Glu Val Leu Ala Ala Lys Pro Lys Ile Thr	
40 45 50	
ogo att ada dat etd aat dta daa per hag gag egd bag ged tit tad - 360	ń
Ary I'm Thr His Leu Ash Leu Gln Pro Gln Glu Arg Gln Ala Phe Tyr	
55 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
ago oto ota gaa aat gag otg att bag gaa tit ott tot atg gab tob. 44.5	
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73 75 80	
tgt ota aag att toa gab aag tat oto ata goa atg gtt ota goa tat = 46.	2
Cys Leu Lys Ile Ser Asp Lys Tyr Leu Ile Ala Met Val Leu Ala Tyr	
85 90 95 100	
titt aag ogg gog ggo eto tac acc age gag tac aca acc atg aat tits — 510	Ū

Phe	Lys	Arg	Ala	Gly 105	Leu	Tyr	Thr	Ser	Glu 110	Tyr	Thr	Thr	Met	Asn 115	Phe	
	-	-			atg Leu	_		-	-		_	-	-		-	558
					ttc Phe											60 წ
					tta Leu	-			-	-			-		=	654
					gtt Val 170											702
					tgg Trp											750
					ggt Gly											796
					aca Thr											84 წ
-	-	-	-		ggt Gly					-					-	894
					tac Tyr 250				-							942
					ota Leu											999
			_	-	ecg Pro	_	=					_		-	_	1038
ttg	gaa	tgg	cac	cac	ctt	tago	casca	atg t	cato	etet	gt go	cttt	catto	2		1086

Leu Glu Trp His His Leu 295

ttotchaato cacqaqotca agaagcactt aacctotoct aagcacttge chatgtocot 1146
attoagasta atgaattaaa tgggagaggt gactattgcc ataaagggaa ggatgccact 1206
tagagtggag aataatactt gccaaaaaatg gtgtttgggt ctgtttaaac tgttgctatt 1266
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<2105 4

+:211:- 298

-02120 PRT

<:213: Xenopus sp.</pre>

< 4000 4

Met Ard His Met Gln Ser Ala Thr Arg Ala Thr Leu Val Sys Gly Ser 1 5 10 15

Gly Val Lys Gln Ile Ile Ala Lys Gly His Pro Asn Thr Arg Val Phe
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Gly Ala Arg Lys Ala Lys Ile Pro Glu Arg Glu Val Leu Ala Ala Lys
35 40 45

Fro Lys Ile Thr Arg Ile Thr His Leu Asn Leu Gln Pro Gln Glu Arg 50 60

Gln Ala Phe Tyr Arg Leu Leu Glu Asn Glu Leu Ile Gln Glu Phe Leu
65 70 75 80

Ser Met Asp Ser Cys Leu Lys Ile Ser Asp Lys Tyr Leu Ile Ala Met 85 90 95

Val Leu Ala Tyr Fne Lys Arg Ala Gly I---. Tyr Thr Ser Glu Tyr Thr
100 105 110

Thr Met Asn Phe Phe Val Ala Leu Tyr Leu Ala Asn Asp Met Glu Glu
115 120 125

Asp Glu Glu Asp Tyr Lys Tyr Glu Ile Phe Pro Trp Ala Leu Gly Asp 130 135 140

Ser Trp Arg Glu Phe Phe Pro Gln Phe Leu Arg Leu Arg Asp Asp Phe

145 150 155 160

Trp Ala Lys Met Asn Tyr Arg Ala Val Val Ser Arg Arg Cys Cys Asp 165 170 175

Glu Val Met Ala Lys Asp Pro Thr His Trp Ala Trp Leu Arg Asp Arg 180 185 190

Pro Ile His His.Ser Gly Ala Leu Arg Gly Tyr Leu Arg Asn Glu Asp 195 200 205

Asp Phe Phe Pro Arg Gly Pro Gly Leu Thr Pro Ala Ser Cys Ala Leu 210 215 220

Cys His Lys Ala Ser Val Cys Asp Ser Gly Gly Val Ser His Asp Asn 225 230 235 240

Ser Ser Pro Glu Gln Glu Ile Phe His Tyr Thr Asn Arg Glu Trp Ser 245 250 255

Glin Glin Leu Leu Ile Leu Pro Pro Glu Leu Leu Leu Asp Pro Glu Ser 260 200 200

Thr Tyr Asp Ile His Ile Phe Gln Glu Pro Leu Val Gly Leu Glu Pro 275 280 285

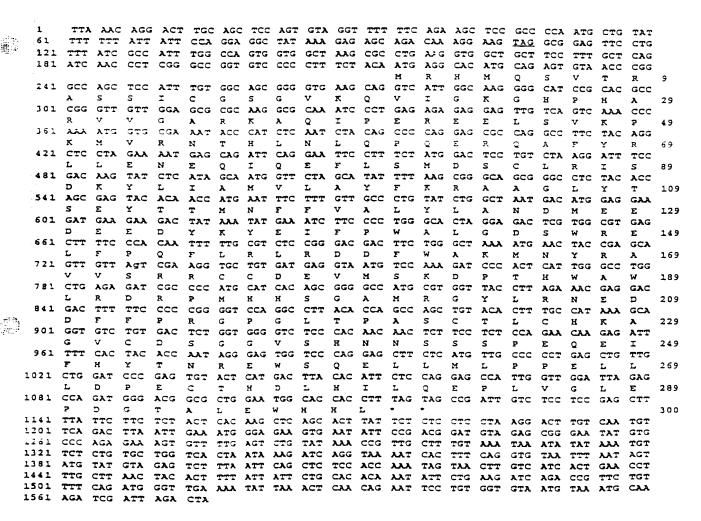
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JO1 00 / 80 5 5 9 2 JO1 01 2 AUG 2001 PCT/EP00/00877

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SEQ ID NO. 1

ls 26 cDNA



SEQ ID NO. 2

ls 27 cDNA

GCT GTA TTT TAC TTT CTT TCA GGA GGC TAT AAA GAC AAC AGA CAG GGG AGG TAG GCA GAG TTC CTG TTC ATC ACC ATT CTT TGG CCG TTG GTG GCT AGG CGC CTG AAG GTG GCT ACC 121 TTT GCT CAG ATC AAC CCT CGG TTC GTT GTC CCC CTT TCT ACA ATG AGG CAT ATG CAG AGT R H 181 GCA ACC CGG GCC ACC TTA GTT TGT GGC AGC GGG GTA AAG CAG ATC ATT GCC AAG GGA CAT 26 241 CCG AAT ACC CGG GTT TTT GGA GCG CGC AAG GCG AAA ATC CCT GAG AGA GAG GTG CTA GCA E 301 GCC AAA CCC AAG ATC ACG CGC ATT ACA CAT CTC AAT CTA CAA CCC CAG GAG CGC CAG GCC H 361 TTT TAC AGG CTC CTA GAA AAT GAG CTG ATT CAG GAA TTT CTT TCT ATG GAC TCC TGT CTA N 421 ANG ATT TON GAC ANG THT CTC ATA GON ATG GTT CTN GON THT TIT ANG CGG GGG GGC CTC R G 106 481 TAC ACC AGC GAG TAC ACA ACC ATG AAT TTC TTT GTT GCT CTG TAT CTG GCT AAT GAC ATG 126 541 GAG GAA GAT GAA GAC TAT AAA TAT GAA ATC TTC CCC TGG GCA CTA GGA GAT TCA TGG 501 CGT GAG TTT TTC CCA CAA TTT TTA CGT CTC CGG GAC GAC TTC TGG GCT AAA ATG AAC TAC 166 М N 661 CGA GCA GTT GTT AGC CGA AGA TGT TGT GAT GAG GTA ATG GCG AAA GAT CCC ACT CAT TGG н 186 721 GCC TGG CTC AGA GAT CGT CCT ATT CAT CAT AGT GGG GCC CTG CGT GGT TAC CTC AGA AAT H H 206 781 GAG GAT GAC TIT TIC CCT CGG GGT CCA GGC CIT ACA CCA GCC AGC TGT GCA CIT TGC CAT 226 841 AAA GCA AGT GTC TGT GAC TCT GGT GGG GTG TCC CAT GAC AAC TCT TCT CCA GAA CAA GAG E 0 901 ATT TTT CAC TAC ACC AAT AGG GAG TGG TCC CAG GAA CTT CTC ATC TTG CCA CCT GAA CTG 266 E E 961 TTA TTG GAT CCG GAG TCT ACT TAT GAC ATC CAC ATT TTC CAG GAA CCG TTG GTT GGA TTA G 1921 GAG CCA GAT GGG GCA GCC TTG GAA TGG CAC CAC CTT TAG CAC CAT GTC ATC TCT GTG CTT н 298 E н 1081 TCA TTC TTC TCT AAT CCA CGA GCT CAA GAA GCA CTT AAC CTC TCC TAA GCA CTT GCC CAT 1141 GTC CCT ATT CAG ACT AAT GAA TTA AAT GGG AGA GGT GAC TAT TGC CAT AAA GGG AAG GAT 1201 GCC ACT TAG AGT GGA GAA TAA TAC TTG CCA AAA ATG GTG TTT GGG TCT GTT TAA ACT GTT 1261 GCT ATT TCA GTT GCC TTG TAA ATA AAT AAG TAT AAA AAT GTA TGC TCT GTG CCG GTT GCT 1321 ANT ANN ANN AND ATC TGG TAT CAN ANN ANN ANN ANN A



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SEQ ID NO.3

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λ	5	s	I	C	G	s	G	v	ĸ	Q	v	I	G	ĸ	G	н	P	н	λ	29
R	v	v	G	A	R	ĸ	A	Q	I	P	E	R	Ξ	E	L	s	v	ĸ	P	49
к	M	v	R	N	Ŧ	н	L	N	r.	Q	P	Q	Ξ	R	Q	A	F	Y	R	69
L	L	E	N	E	Q	I	Q	£	F	L	s	M	ם	s	С	L	R	I	s	89
D	ĸ	Y	L	I	A	M	v	L	A	Y	F	ĸ	R	λ	λ	G	L	Y	T	109
s	Ε	Y	Ŧ	Ŧ	м	N	f	F	v	A	L	Y	L	λ	N	ם	M	E	E	129
D	Ε	Ε	Ď	Y	κ	Y	E	I	F	P	W	A	L	G	۵	s	W	R	Ξ	149
L	F	P	Q	F	L	R	L	R	α	Q	F	W	λ	ĸ	M	N	Y	R	A	169
v	v	s	R	Ŕ	С	c	۵	E	v	M	s	ĸ	D	P	T	H	W	λ	W	189
L	R	D	R	P	M	н	н	s	G	A	M	R	G	Y	L	R	N	E	α	209
۵	F	F	P	R	G	P	G	L	T	P	A	\$	С	T	L	C	н	ĸ	λ	229
G	v	C	D	s	G	G	v	s	Ħ	N	N	s	s	s	P	E	Q	Ε	I	249
F	H	Y	T	N	R	E	W	s	Q	E	L	L	M	L	P	P	Ē	L	L	269
L	a	P	E	c	T	н	ם	L	H	I	L	Q	Σ	P	L	v	G	L	E	289
P	۵	G	T	A	L	E	w	H	н	L	•	•								300

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SEQ ID NO. 4

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